



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0685; Project Identifier AD-2021-00432-T; Amendment 39-22015; AD 2022-08-12]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2020-21-17, which applied to all The Boeing Company Model 757 airplanes. AD 2020-21-17 required repetitive inspections for skin cracking and shim migration at the upper link drag fittings, diagonal brace cracking, and fastener looseness; and applicable on-condition actions. This AD was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads and cracks found in the skin of the fastener holes, and the need to reduce the compliance time for certain groups. This AD retains the requirements of AD 2020-21-17 with reduced compliance times for certain airplane groups. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600

Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0685.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0685; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: David Truong, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5224; email: david.truong@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2020-21-17, Amendment 39-21290 (85 FR 79418, December 10, 2020) (AD 2020-21-17). AD 2020-21-17 applied to all The Boeing Company Model 757 airplanes. The NPRM published in the *Federal Register* on September 9, 2021 (86 FR 50485). The NPRM was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads and cracks found in the skin of the fastener holes, and the need to reduce the compliance time for certain groups. In the NPRM, the FAA proposed to retain

the requirements of AD 2020-21-17 with reduced compliance times for certain airplane groups. The FAA is issuing this AD to address cracking in the wing upper skin and forward drag fittings, which could lead to a compromised upper link and reduced structural integrity of the engine strut, and possible separation of a strut and engine from the airplane during flight.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from the Air Line Pilots Association, International (ALPA), Boeing, and FedEx who supported the NPRM without change.

The FAA received additional comments from three commenters, including Aviation Partners Boeing (APB), United Airlines (UAL), and United Parcel Service (UPS). The following presents the comments received on the NPRM and the FAA's response to each comment.

Effect of Winglets on Accomplishment of the Proposed Actions

APB stated that accomplishing Supplemental Type Certificate (STC) ST01518SE does not affect the actions specified in the proposed AD.

The FAA concurs with the commenter. The FAA has redesignated paragraph (c) of the proposed AD as paragraph (c)(1) of this AD and added paragraph (c)(2) to this AD to state that installation of STC ST01518SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01518SE is installed, a "change in product" alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

Request to Clarify Certain Figures in the Service Information

UAL requested clarification of Figures 21 and 22 for an open-hole high frequency eddy current (HFEC) inspection as specified in Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021. UAL stated that in note (a) of

Figures 21 and 22, it specifies to “Do an open-hole HFEC inspection for any crack in accordance with 757 NDT [Non-Destructive Test] Manual Part 6, 51-00-16,” at the “Fastener Holes and Drag Fitting.” UAL also stated that this is different than the inspection specified in note (a) of Figures 7 and 8 which specifies to “Do an open-hole HFEC inspection for any crack of the holes of loose fasteners only in accordance with 757 NDT Manual Part 6, 51-00-16” at the “Fastener Holes.”

UAL stated that the NDT manual references are the same in Figures 7 and 8, and Figures 21 and 22. UAL commented that Figures 7 and 8 are used in Part 4 inspections (only at loose fastener hole locations found at locations 11 through 18) of the service information; and Figures 21 and 22 are used in Part 8 inspections (inspections of all fastener locations 11 through 18) of the service information. UAL commented that it is not clear what the intent is of making step 1 in Figures 21 and 22 specify “Fastener Holes” and “Drag Fitting,” (listed as two separate items) and if these are different inspections of the fastener holes.

The FAA agrees to provide clarification. Part 4 inspections use Figures 7 and 8 of the service information to inspect for any cracking, and are an on-condition action required only for any fastener holes that are found (during Part 2 inspections) to have loose fasteners in the wing upper skin. Part 8 inspections use Figures 21 and 22 to inspect for any cracking in the fastener holes of the upper wing skin and drag fitting, and are required for all airplanes. Accomplishing an open hole HFEC inspection as a result of Condition 5 (which requires accomplishing figures 7 and 8), meets the requirement of the open hole HFEC inspection of fastener holes 11 through 18 for only the fastener hole(s) inspected (as specified in note (a) of Tables 4 and 7 in the Accomplishment Instructions of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021). The open hole HFEC inspection for any cracking of fastener holes 11 through 18 specified in Figures 7 and 8 and Figures 21 and 22 are the same, however the “Drag

Fitting” specified in Figures 21 and 22 is emphasized so the drag fitting fastener holes are not missed when performing the open hole HFEC inspection through the fastener hole shared between the upper wing skin and drag fitting. Part 4 and Part 8 have different compliance times and repetitive inspection intervals. The FAA has not changed this AD in this regard.

Request to Include Previously Approved AMOCs

UPS requested that the FAA include previously approved AMOCs in the proposed AD for AD 2018-16-05, Amendment 39-19345 (83 FR 38250, August 6, 2018) (AD 2018-16-05), which was superseded by AD 2020-21-17.

The FAA agrees with the request. AMOCs for AD 2018-16-05 that are still applicable to the corresponding provisions of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021, which are required by paragraph (g) of this AD, are approved as AMOCs for this AD. The FAA has added paragraph (j)(5) to this AD to include AMOCs approved for AD 2018-16-05.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021. This service information specifies procedures for repetitive general visual and detailed inspections for loose fasteners, skin cracking, and shim migration at the upper link drag fittings, and for cracking in the diagonal brace and diagonal brace fittings; repetitive open-hole high frequency eddy current inspections for

cracking of the fastener holes and loose bolt holes; and applicable on-condition actions. On-condition actions include installing the upper link and upper link pins; replacing drag fittings; installing bolts, washers, and nuts; performing a torque check of fasteners on the affected shims; trimming affected shims and applying chemical conversion coating on the shims, fillet seal, and drag fittings; and repairing cracks, migrated shims, mistorqued bolts, and loose fasteners.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Costs of Compliance

The FAA estimates that this AD would affect 450 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Repetitive HFEC inspections	85 work-hours X \$85 per hour = \$7,225 per inspection cycle	\$0	\$7,225 per inspection cycle	\$3,251,250 per inspection cycle

The FAA has received no definitive data on which to base the cost estimates for the on-condition actions specified in this AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2020-21-17, Amendment 39-21290

(85 FR 79418, December 10, 2020); and

b. Adding the following new AD:

2022-08-12 The Boeing Company: Amendment 39-22015; Docket No. FAA-2021-0685; Project Identifier AD-2021-00432-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2020-21-17, Amendment 39-21290 (85 FR 79418, December 10, 2020) (AD 2020-21-17).

(c) Applicability

(1) This AD applies to all The Boeing Company Model 757-200, -200PF, -200CB, and -300 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST01518SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01518SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by reports of bolt rotation in the engine drag fitting joint and fastener heads and cracks found in the skin of the fastener holes, and the need to

reduce the compliance time for certain groups. The FAA is issuing this AD to address cracking in the wing upper skin and forward drag fittings, which could lead to a compromised upper link and reduced structural integrity of the engine strut, and possible separation of a strut and engine from the airplane during flight.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 757-57A0073, Revision 2, dated March 1, 2021, which is referred to in Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021, uses the phrase “the Original Issue date of Requirements Bulletin 757-57A0073 RB,” this AD requires using September 10, 2018 (the effective date of AD 2018-16-05, Amendment 39-19345 (83 FR 38250, August 6, 2018)).

(2) Where the Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021, uses the phrase “the Revision 1 date of Requirements Bulletin 757-57A0073 RB date of this service bulletin,” this AD requires using January 14, 2021 (the effective date of AD 2020-21-17).

(3) Where the Condition and Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021, uses the phrase “the Revision 2 date of Requirements Bulletin 757-57A0073 RB,” this AD requires using the effective date of this AD.

(4) Where Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021, specifies contacting Boeing for repair instructions: This AD requires doing the repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraph (g) of this AD, except for the open-hole high frequency eddy current inspections at fastener locations 11-18, if those actions were performed before the effective date of this AD using Boeing Alert Requirements Bulletin 757-57A0073 RB, dated July 14, 2017.

(2) This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 1, dated August 1, 2019. This service information is not incorporated by reference in this AD.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in Related Information. Information may be emailed to:

9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved for AD 2020-21-17 are approved as AMOCs for the corresponding provisions of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021, that are required by paragraph (g) of this AD.

(5) AMOCs approved for AD 2018-16-05, Amendment 39-19345 (83 FR 38250, August 6, 2018) are approved as AMOCs for the corresponding provisions of Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021, that are required by paragraph (g) of this AD.

(k) Related Information

(1) For more information about this AD, contact David Truong, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5224; email: david.truong@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(3) and (4) of this AD.

(I) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 757-57A0073 RB, Revision 2, dated March 1, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on April 7, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-09663 Filed: 5/5/2022 8:45 am; Publication Date: 5/6/2022]